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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/560,143

09/25/2006

Kyung-Ho Lee

2077-4 PCT US

1092

66547 7590 07/09/2010

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EXAMINER

HADIZONOOZ, BANAFSHEH

ART UNIT

PAPER NUMBER

3715

MAIL DATE

DELIVERY MODE

07/09/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/560,143	<b>Applicant(s)</b> LEE, KYUNG-HO	
	<b>Examiner</b> Banafsheh Hadizonooz	<b>Art Unit</b> 3715	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

### **Detailed Action**

In response to the amendment filed on 01/05/2010, claims 1-8 are pending. This office action is Final.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 rejected under 35 U.S.C. 103(a) as being unpatentable over Kato (US 5,808,224) in view of Kuramochi et al. (US 7,328,272) and further in view of Ogawa et al. (US 5,906,494).

Regarding claims 1, 5 and 6, Kato discloses a portable downloader connectable to karaoke player comprising an RF receiver for receiving voice signal and key data signal transmitted (See claim 3) via a receiving antenna; a demodulator for demodulating the signal applied thereto from the RF signal (See Abstract and P.7, 5-22, Col.12, 5-28); a waveform shaping unit (e.g. modulator)(See fig.2, element 36); a receiver connected to an external computing device having a computing function and a sound processing function, the receiver controlling the internal operation of the RF karaoke data signal receiving pack while transmitting the digital voice signal and key data signal (See Col.7, 35-50); an optical disk for storing a karaoke system operating program executed and read by the external computing device, song data and background image data(See Col.1, 54-Col.2, 2 and Col.12, 5-28).

Art Unit: 3715

Kato does not specifically disclose an A/D converter for converting the voice signal into the digital signal, a serial communication interface and an extension pack in which additional songs are recorded, the extension being connected to an extension pack slot to transmit data. However, Kuramochi teaches an apparatus and method for adding music content to visual content wherein the interface could be a variety of MIDI interfaces including a serial interface (See Col.9, 23-35). Kuramochi also discloses A/D converter (See Col.11, 4-30) and external storage device (See Fig. 2, element 7) and microphone for modulating generated signals (See figure 3, and Col.11, 4-31).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the system of Kato to incorporate the features of Kuramochi's invention in order to design a system with more universal features, enhanced capabilities and data processing features.

Kato/Kuramochi do not specifically disclose an audio/key data separator. However, Ogawa discloses a training apparatus for singing wherein model vocal extractor separates demodulated vocal and data signals (See Fig.1, element 30 and Col.4, 34-53). Therefore, it would have been obvious to one of ordinary skill in the art to modify Kato/Kuramochi to include the signal separator as disclosed by Ogawa in order to create the desired music effects.

With respect to claims 2-4, Kuramochi further disclose wherein serial communication interface transmits or receives signals in a wired/wireless manner (See Col.9, 36-67) and wherein the external computing device comprises a game apparatus or a personal computer (See Col.10, 8-20).

Art Unit: 3715

Regarding claims 7 and 8, Kuramochi discloses USB interface and DVD-ROM (See Col.9, 23-35 and 53-64).

### ***Response to Arguments***

Applicant's arguments filed on 04/05/2010 have been fully considered but they are not persuasive.

The applicant argues that the prior art of record, Kato, does not disclose a waveform shaping unit for shaping the waveform of the key data signal. The Examiner respectfully disagrees. Examiner has included the correct citation in the rejection of claim 1. Furthermore, figure 2 of Kato reference discloses a modulator which modulates the waveform to reduce the DC component (See Col.2, 1-35).

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 3715

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Banafsheh Hadizonooz whose telephone number is 571-272-1242. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xuan Thai can be reached on (571) 272- 7147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BH

/Cameron Saadat/  
Primary Examiner, Art Unit 3715